

CANT 2019 Program

Tuesday, May 21, 2019
CUNY Graduate Center, Room 9206

Program as of May 11, 2019 and subject to change.

Registration in Room 9206

- 7:30 - 8:00 a.m. **Coffee and muffins in Room 9206**
- 8:00 - 8:25 a.m. **Ariane Masuda**, New York City Tech (CUNY)
Functional graphs of Rédei functions
- 8:30 - 8:55 a.m. **Rishi Nath**, York College (CUNY)
Simultaneous core partitions with nontrivial common divisor
- 9:00 - 9:25 a.m. **Paul Baginski**, Fairfield University
Abundant numbers and nonunique factorization
- 9:30 - 9:55 a.m. **Amanda Burcroff**, University of Michigan
Covering problems involving the unitary Cayley graph of $\mathbb{Z}/n\mathbb{Z}$
- 10:00 - 10:25 a.m. **Paolo Leonetti**, Graz University of Technology, Austria
Small sets of integers
- 10:30 - 10:55 a.m. **Huixi Li**, University of Nevada, Reno
On two lattice points problems about the parabola
- 11:00 - 11:25 a.m. **Mizan R. Khan**, Eastern Connecticut State University
A conjecture on visible points in lattice parallelograms
- 11:30 - 11:55 a.m. **Nikita Pereverzin**, United States Military Academy, West Point , NY
The God's Number for the $n \times n$ Rubik's Slide
- 12:00 - 1:30 p.m. **Lunch**

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- 1:30 - 1:55 p.m. **Jonathan Sondow**, New York
Carmichael and polygonal numbers, Bernoulli polynomials, sums of base- p digits
- 2:00 - 2:25 p.m. **Matthew Hase-Liu**, Harvard University
Sum-product phenomena for planar hypercomplex numbers
- 2:30 - 2:55 p.m. **Jun Seok Oh**, University of Graz
An inverse zero-sum problem for some non-abelian groups
- 3:00 - 3:25 p.m. **Mel Nathanson**, Lehman College (CUNY)
Matrix scaling and arithmetic
- 3:30 - 3:55 p.m. **Satyanand Singh**, New York City Tech (CUNY)
Generating terms of Nathanson's lambda sequences
- 4:00 - 4:25 p.m. **Andrew Odesky**, University of Michigan
Characterizing polynomial sequences in p -adic interpolation
- 4:30 - 4:55 p.m. **Kevin O'Bryant**, College of Staten Island (CUNY)
Explicit bounds on the number of zeros of Dirichlet L -functions
- 5:00 - 5:30 p.m. **Problem session**, led by Kevin O'Bryant
- 5:30 - 6:30 p.m. **Wine and cheese reception** in the Math Lounge, Room 4214

CANT 2019 Program

Wednesday, May 22, 2019
CUNY Graduate Center, Room 9206

Program as of May 11, 2019 and subject to change.

Registration in Room 9206

- 7:30 - 8:00 a.m. **Coffee and muffins in Room 9206**
- 8:00 - 8:25 a.m. **Steven Senger**, Missouri State University
Chains of points determined by distances
- 8:30 - 8:55 a.m. **Robert W. Donley, Jr.**, Queensborough Community College (CUNY)
The gentle art of 3×3 semi-magic squares
- 9:00 - 9:25 a.m. **Timothy Newlin**, United States Military Academy, West Point , NY
Twitter response to Munich July 2016 attack: Network analysis of influence
- 9:30 - 9:55 a.m. **Alex Rice**, Millsaps College
Deligne polynomials in difference sets
- 10:00 - 10:25 a.m. **Charles Helou**, Penn State, Brandywine
A characterization of representation functions
- 10:30 - 10:55 a.m. **Heidi Goodson**, Brooklyn College (CUNY)
Vertically aligned entries in Pascal's triangle and applications to number theory
- 11:00 - 11:25 a.m. **Cosmin Pohoata**, California Institute of Technology
Sets without 4APs but with many 3APs
- 11:30 - 11:55 a.m. **Akshat Mudgal**, University of Bristol
Sums of linear transformations in higher dimensions
- 12:00 - 1:30 p.m. **Lunch**

CANT 2019 Program

Wednesday, May 22, 2019
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Program as of May 11, 2019 and subject to change.

- 1:30 - 1:55 p.m. **David Gryniewicz**, University of Memphis
An inverse zero-sum problem for elementary abelian p -groups of rank two
- 2:00 - 2:25 p.m. **Sandor Kiss**, Budapest University of Technology and Economics, Hungary
A problem of Erdős about sets without pairwise coprime integers
- 2:30 - 2:55 p.m. **Ryan W. Matzke**, University of Minnesota - Twin Cities
Maximum size (k, l) -sum-free sets in abelian groups
- 3:00 - 3:25 p.m. **Noah Kravitz**, Yale University
A stronger connection between the Erdős-Burgess and Davenport constants
- 3:30 - 3:55 p.m. **Alisa Sedunova**, MPIM Bonn
Intersections of binary quadratic forms in primes and the paucity phenomenon
- 4:00 - 4:25 p.m. **Jing-Jing Huang**, University of Nevada, Reno
The rational points close to a manifold
- 4:30 - 4:55 p.m. **Trevor Hyde**, University of Michigan
Cyclotomic factors of necklace polynomials
- 5:00 - 5:30 p.m. **Problem session**, led by David Gryniewicz
- 5:30 - 6:30 p.m. **Pizza party** in the Math Lounge, Room 4214

CANT 2019: Jean Bourgain Memorial

Thursday, May 23, 2019

CUNY Graduate Center, Science Center, Room 4102

Registration in Room 4102

- 7:30 - 8:00 a.m. **Coffee and muffins in Room 4102**
- 8:00 - 8:45 a.m. **Alex Iosevich**, University of Rochester
On certain analytic, combinatorial and number-theoretic aspects of frame theory
- 9:00 - 9:45 a.m. **Mariusz Mirek**, Rutgers University - New Brunswick
Dimension free estimates for the discrete Hardy–Littlewood maximal functions
- 10:00 - 10:45 a.m. **Yumeng Ou**, Baruch College (CUNY)
Applications of decoupling in distance set problems
- 11:00 - 11:45 a.m. **Hong Wang**, MIT
Incidences between points and tubes
- 11:45 - 1:00 p.m. **Lunch**
- 1:00 - 1:45 p.m. **Misha Rudnev**, University of Bristol
On growth in groups $SL_2(\mathbb{F}_p)$ and $\text{Aff}(\mathbb{F}_p)$
- 2:00 - 2:45 p.m. **Ilya Shkredov**, Steklov Mathematical Institute, Moscow, Russia
 SL_2 -actions, modular hyperbolas, and Kloosterman sums
- 3:00 - 3:45 p.m. **Adam Sheffer**, Baruch College (CUNY)
Lower bounds for incidences with hypersurfaces
- 4:00 - 4:25 p.m. **Robert Hough**, SUNY - Stony Brook
Cut-off phenomenon for the abelian sandpile model on tiling graphs
- 4:30 - 4:55 p.m. **Steven J. Miller**, Williams College
Recent progress in sumsets, generalized Schreier sets, generalized Zeckendorf decompositions, and prime and square-free walks
- 5:00 - 5:30 p.m. **Problem session**, led by Steven J. Miller
- 5:30 - 6:30 p.m. **Wine and cheese reception**

CANT 2019 :Jean Bourgain Memorial

Friday, May 24, 2019

CUNY Graduate Center, Science Center, Room 4102

Registration in Room 4102

- 7:30 - 8:00 a.m. **Coffee and muffins in Room 4102**
- 8:00 - 8:45 a.m. **Neil Lyall**, University of Georgia
Hypercubes in sets of positive upper density
- 9:00 - 9:45 a.m. **Akos Magyar**, University of Georgia
Spherical point configurations
- 10:00 - 10:45 a.m. **Ben Krause**, California Institute of Technology
Discrete analogues in harmonic analysis: Directional maximal functions in \mathbb{Z}^2
- 11:00 - 11:45 a.m. **Alex Kontorovich**, Rutgers University, New Brunswick
On working with Jean Bourgain
- 11:45 - 1:00 p.m. **Lunch**
- 1:00 - 1:45 p.m. **Jozsef Solymosi**, University of British Columbia, Canada
Problems and results on the sum-product problem of Erdős and Szemerédi
- 2:00 - 2:45 p.m. **Van Vu**, Yale University
On square sum-free sets
- 3:00 - 3:25p.m. **Aled Walker**, Trinity College, Cambridge
Linear inequalities in primes
- 3:30 - 3:55p.m. **Yunied Puig de Dios**, University of California, Riverside
Kříž's theorem via dynamics of linear operators
- 4:00 - 4:25 p.m. **Colin Defant**, Princeton University
Connected components of ranges of divisor functions
- 4:30 - 4:55 p.m. **Wenbo Sun**, Ohio State University
Sarnak's Conjecture for nilsequences on arbitrary number fields, and applications
- 5:00 - 5:30 p.m. **Problem session**, led by Alex Iosevich
- 5:30 - 6:30 p.m. **Wine and cheese reception**